[0067] Map data can optionally be downloaded first as a Maplet Index enabling the user to then choose which DEntries listed in the Index to download in full. Furthermore, as described earlier, the map application can include user-configurable context filtering that enables the user to filter out unwanted map features or artifacts by not downloading specific DEntries corresponding to those unwanted map features or artifacts.

[0068] As shown now in FIG. **4**, a wireless communications device (such as device **202**) may optionally have a Global Positioning System (GPS) receiver **550** (i.e. an embedded GPS chipset or an externally-connected Bluetooth™ GPS puck) for determining a current position of the device. The device **202** has a processor (e.g. microprocessor **238**) operatively coupled to memory (e.g. Flash Memory **224** and/or RAM **226**) for executing an application, such as a map or navigation application **500** configured to render a map on a display (e.g. GUT **222**) of the device, e.g. to show the current position of the device on the map.

[0069] As further depicted in FIG. **4**, the handheld wireless communications device **202** has a radiofrequency transceiver (e.g. RF transceiver circuitry **211**) for wirelessly exchanging data with data sources on the Internet (data network **130**). The wireless device **202** communicates via the wireless network **104** using protocols and techniques known in the art. Mediating between the wireless network **104** and the data network (Internet) **130** is (optionally) an applications gateway (AG) **350** which performs various encodings, mappings, compressions and optimizations on the data in order to facilitate data transmission between the wireless devices **202** and online data sources (e.g. public and private map servers **400**, **410**) connected to the Internet **130**. The map server extracts generic map content from a Geographical Information Systems (GIS) map database (e.g. Navtech®, TelAtlas®, etc.) at a specified level of resolution ("zoom level"). Custom graphics associated with the query, such as highlighted route, pushpin for current position or street address, etc. are post-processed and merged by the server with the generic map content. Relevant screen graphics are then labelled and the merged map graphic is compressed and delivered to the device for display. Alternatively, labelling can be done client-side using a computationally efficient labelling algorithm.

[0070] The wireless communications device **202** can thus download and display map, route and current position information on the device's display or GUI **222**, e.g. a touchscreen display. As will be elaborated below, the map information (or any other type of information for that matter) can be selectively magnified onscreen to facilitate viewing of any particular portion of the onscreen information.

[0071] For example, in one implementation which will be elaborated below, it may be useful to magnify the area surrounding the current position where the current position is shown on a map for real-time navigation. To determine its current position, the wireless communications device **202** would include a Global Positioning System (GPS) receiver (e.g. GPS chip **550** shown in FIG. **4**). The GPS chipset may implement Aided GPS or Assisted GPS technologies to improve acquisition times. Optionally, radio-location or triangulation techniques can be applied to attempt to improve the accuracy of the GPS position fix. Although the present disclosure refers to expressly to the "Global Positioning System", it should be understood that this term and its abbreviation "GPS" are being used expansively to include any satellite-based navigation-signal broadcast system, and would therefore include other systems used around the world including the Beidou (COMPASS) system being developed by China, the multi-national Galileo system being developed by the European Union, in collaboration with China, Israel, India, Morocco, Saudi Arabia and South Korea, Russia's GLONASS system, India's proposed Regional Navigational Satellite System (IRNSS), and Japan's proposed QZSS regional system.

[0072] As further depicted in FIG. **4**, a processor (e.g. microprocessor **238** shown in FIG. **4**) is operatively coupled to memory (e.g. Flash Memory **224** and RAM **226** shown in FIG. **4**) for executing for executing an application (e.g. a map application) configured to present information on the display screen, e.g. touch-sensitive display, of the device and for controlling actuation of the one or more shape-changing zones of the touch-sensitive display screen. In one example, the application is a map/navigation application (and the information displayed onscreen is a map showing current position of the device). GPS position data is received from the GPS chipset **550**. Based on the current position, as determined by the GPS receiver **550**, the map/navigation application **500** sends a request to download new or updated map data from a map server (assuming the map data in the local cache is insufficient). The request (either an AOI request or a DEntry request, in the exemplary case of Maplets as described above) specifies an area of interest (AOI) having a bounding box that is centered around the GPS-determined coordinates or, alternatively, specific DEntries. When the map data is received at the device, a map showing the current position of the device is rendered for display onscreen. The current position can then be magnified by actuating the shape-changing zones of the shape-changing display at the current position so that a magnifying lens is formed above the current position icon and the immediately surrounding area.

[0073] In operation, a user of the wireless communications device **202** uses an input device such as keyboard **232** and/or thumbwheel/trackball **233** to cause the microprocessor **238** to open the map (or navigation) application **500** stored in the memory **224**. Alternatively, the map application can be launched by another application, such as a location-based services (LBS) application. The input device could also be integrated into the LCD display screen in the form a touchscreen device. Using the keyboard **232** and thumbwheel/trackball **233**, the user can launch the map/navigation application **500**. In response to this request/command, the microprocessor **238** instructs the RF transceiver circuitry **211** to transmit the request over the air through the wireless network **104**. The request is processed by the AG **350** and forwarded into the data network (Internet) using standard packet-forwarding protocols to one or more of the public and/or private map servers **400**, **410**. Accessing a private map server **410** behind a corporate firewall **420** was described above with reference to FIG. **3**A. Map data downloaded from these one or more map servers **400**, **410** is then forwarded in data packets through the data network and encoded/transformed/optimized by the AG **350** for wireless transmission through the wireless network **104** to the wireless communications device **202** that originally sent the request.

[0074] The downloaded map data (including any available label data) can be cached locally in RAM **226**, and displayed on the display **222** or graphical user interface (GUI) of the device. If a further request is made by the user (or if the user wants a change in the field of view by zooming or panning), the device will check whether the data required can be